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ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024				
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BENGZON, GREG C				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/069,823

Applicant(s)

GRAF ET AL.

Examiner

GREG BENZON

Art Unit

2144

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 74-77 and 81-96 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 74-77, 81-96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This application has been examined. Claims 74-77, 81-96 are pending. Claims 1-73, 78-80 have been cancelled. Claims 91-96 are submitted as new claims.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/18/2008 has been entered.

Priority

This application claims benefits of priority from PCT Application PCT/AU00/01070, filed September 8, 2000 and Foreign Application (AUSTRALIA) PQ2741, filed September 9, 1999.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 74-76 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 74-76 are directed towards '*a rate control function means*'. Upon inspection of the Applicant Specifications Page 9 (See Lines 10-15, 'For UMTS, the 3rd Generation Partnership Project is currently developing the lu-interface between RNCs and UMSCs. This framing protocol includes a rate control mechanism. ') the Examiner concludes said '*rate control function means*' are nothing more than software components.

Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and USPTO personnel should treat a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material.

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 74, 77, 81-84, 87-90 rejected under 35 U.S.C. 103(a) as being unpatentable over Kinrot (US Patent 6574193) in view of Nishio et al. (US Patent 6192039), or alternatively, Nishio in view of Kinrot.

Kinrot disclosed (re. Claim 74, 77, 81, 87-90) an information rate control function means for controlling a communication rate for the transmission of information between a first mobile terminal and a second mobile terminal via a wireless telecommunication system comprising:

the information rate control function means comprising: a first determining means adapted to determine a maximum information transmission rate along a first air interface (Kinrot – Column 3 Lines 1-5, Column 3 Lines 15-20, Column 4 Lines 10-15); a second determining means in communication with the first determining means and

adapted to determine a maximum information transmission rate along a second air interface (Kinrot – Column 3 Lines 1-5, Column 3 Lines 15-20, Column 4 Lines 10-15)

a selection means adapted to select a lowest one of the plurality of maximum information transmission rates, (Kinrot – Column 9 Lines 25-35) and

an authorizing or establishment means adapted to authorize or establish a communication rate no greater than the selected lowest rate.(Kinrot - Column 4 Lines 15-25)

Kinrot disclosed (re. Claim 74) *wherein the communication rate of the codec can be altered based on a type of traffic transmitted* (Kinrot-Column 2 Lines 1-15, 'variable rate encoding depending on signal type')

Kinrot disclosed (re. Claim 74) *wherein the resources relate to an operation of a codec of a terminal*. (Kinrot-Column 6 Lines 5-10, 'varying bit rate of each of the sources')

However Kinrot did not disclose (re. Claim 74) wherein the plurality of access nodes are adapted to control air interface resources and monitor the availability of the resources. Kinrot did not disclose (re. Claim 74) wherein the first and second air interfaces are between each wireless terminal and their respective access node.

Nishio disclosed a method for flow control (Nishio-Column 12 Lines 55-60) in a wireless communication network involving a core network and wireless endpoints. Nishio disclosed (re. Claim 45) wherein the plurality of access nodes are adapted to control air interface resources and monitor the availability of the resources. (Nishio-Figure 2)

Nishio disclosed (re. Claim 74) wherein the first and second air interfaces are between each wireless terminal and their respective access node. (Nishio-Figure 2)

Nishio also disclosed (re. Claim 74) wherein the resources relate to an operation of a codec of a mobile terminal. (Nishio-Figure 2, Column 8 Lines 60-65)

Nishio disclosed (re. Claim 74) controlling *transmission rates along respective air interfaces established between each wireless terminal and an access node'* (Nishio-Figure 2, Column 13 Lines 1-35)

Kinrot and Nishio are analogous art because they present concepts and practices regarding rate control across ATM networks. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Nishio into

Kinrot, such the the ATM network of Kinrot is enabled to include wireless endpoints. The motivation for said combination would have been in order to allow for Kinrot to apply the rate control across the entire ATM network, including wireless the endpoints, such that the ATM network is not affected by problems due to 'instantaneous break' (Nishio-Column 1 Lines 45-50).

Alternatively, it would have been obvious to combine Kinrot into Nishio, such that Nishio is able to apply the flow control method of Kinrot and prevent congestion across the wireless interfaces and adapt to stress levels for each VC. (Kinrot – Column 40-45)

Claims 77, 81,87-90 are rejected on the same basis as Claim 74.

Furthermore Kinrot disclosed (re. Claims 74,77,81,87) wherein the resources relate to an operation of a codec of each terminal. (Kinrot-Column 6 Lines 5-10, '*varying bit rate of each of the sources*')

However Kinrot did not disclose (re. Claims 74,77,81,87) wherein the resources relate to an operation of a codec of each mobile terminal .

Nishio disclosed (re. Claims 74,77,81,87) wherein the resources relate to an operation of a codec of each mobile terminal; (Nishio-Figure 2, Column 8 Lines 60-65)

Kinrot and Nishio are analogous art because they present concepts and practices regarding rate control across ATM networks. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Nishio into Kinrot, such that each source terminal of Kinrot is enabled to include wireless endpoints. The motivation for said combination would have been in order to allow for Kinrot to apply the rate control across the entire ATM network, including wireless the endpoints, such that the ATM network is not affected by problems due to 'instantaneous break' (Nishio-Column 1 Lines 45-50).

Alternatively, it would have been obvious to combine Kinrot into Nishio, such that Nishio is able to apply the flow control method of Kinrot and prevent congestion across the wireless interfaces and adapt to stress levels for each VC. (Kinrot – Column 40-45)

Kinrot-Nishio disclosed (re. Claim 82) wherein the communication rate is dynamically authorised and/or established during a communication session (Kinrot – Column 2 Lines 1-5) based on the type of information being communicated by a

wireless mobile terminal to the access node. (Kinrot-Column 3 Lines 45-50, 'ambiguity-resolving field', Column 4 Lines 60-65)

Kinrot-Nishio disclosed (re. Claim 83) wherein the communication rate is authorised and/or established at the set up of a communication session (Kinrot – Column 2 Lines 5-10) between a wireless mobile terminal and the wireless telecommunication network.

Kinrot-Nishio disclosed (re. Claim 84) wherein the communication rate is authorised and/or established prior to set up of a communication session (Kinrot – Column 2 Lines 5-10) between a wireless mobile terminal and the wireless telecommunication network.

Kinrot-Nishio disclosed (re. Claim 49) wherein the information rate control processor means is located in the access nodes. (Kinrot – Column 7 Lines 1-5)

Kinrot-Nishio disclosed (re. Claim 77,) a core network; a plurality of access nodes each in communication with the core network wherein the plurality of access

nodes are adapted to control air interface resources and monitor the availability of the resources. (Nishio-Column 12 Lines 55-60)

Kinrot-Nishio disclosed (re. Claim 54, 60) a plurality of endpoints (Kinrot – Column 2 Lines 60-65); and an information rate control processor adapted to control a communication rate for transmission of information in the communication system among endpoints.(Kinrot - Column 4 Lines 15-25)

Kinrot-Nishio disclosed (re. Claim 50) wherein the information rate control function means is located in the core network. (Kinrot – Column 7 Lines 1-5)

Kinrot-Nishio disclosed (re. Claim 55) wherein the core network comprises an asynchronous transfer mode (ATM) network ; (re. Claim 56) wherein the ATM network includes an AAL2 adaptation layer. (Kinrot – Column 2 Lines 60-65)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 91-96 rejected under 35 U.S.C. 103(a) as being unpatentable over Kinrot (US Patent 6574193) in view of Nishio et al. (US Patent 6192039), or alternatively, Nishio in view of Kinrot, further in view of Rasanen (US Patent 6118834).

While Kinrot-Nishio substantially disclosed (Kinrot – Column 1 Lines 30-65, Column 4 Lines 35-65, Column 6 Lines 1-25) a data structure for end-to-end signaling Kinrot-Nishio did not disclose using said data structure for signaling between base stations.

Kinrot-Nishio disclosed (re. Claim 91) comparing a maximum information transmission rate along a second air interface (Kinrot – Column 3 Lines 1-5, Column 3 Lines 15-20, Column 4 Lines 10-15)

a selection means adapted to select a lowest one of the plurality of maximum information transmission rates, (Kinrot – Column 9 Lines 25-35) and

setting the transmission rate to establish a communication rate no greater than the selected lowest rate. (Kinrot – Column 4 Lines 15-25)

While Kinrot-Nishio substantially disclosed the claimed invention Kinrot-Nishio did not disclose (re. Claim 91) signaling by a first telecommunication node operable to monitor a first air interface, the first telecommunication node signaling to communicate a first maximum air interface transmission rate to a remote node, the first maximum air interface transmission rate being the current maximum supportable rate for communication by a first endpoint.

Rasanen disclosed (re. Claim 91) signaling by a first telecommunication node operable to monitor a first air interface, the first telecommunication node signaling to communicate a first maximum air interface transmission rate to a remote node, the first maximum air interface transmission rate being the current maximum supportable rate for communication by a first endpoint. (Rasanen-Column 3 Lines 20-35, Column 6 Lines 60-65)

Kinrot, Nishio and Rasanen are analogous art because they present concepts and practices regarding rate control across various networks. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine Rasanen into Kinrot-Nishio, such that the ATM network of Kinrot-Nishio is enabled to include wireless endpoints. The motivation for said combination would have been in order to overcome issues in wireless telephone systems where the capacity of the traffic channel section at the radio interface is lower than that of the traffic channel section in the remaining part of the PLMN. (Rasanen-Column 2 Lines 60-65)

Kinrot-Nishio-Rasanen disclosed (re. Claims 92) signaling by a second telecommunication node operable to monitor the second air interface, the second telecommunication node signaling to communicate the second maximum air interface transmission rate to the remote node, (Rasanen-Column 3 Lines 20-35, Column 6 Lines 60-65)

wherein the comparing step is performed in the remote node, and wherein the remote node is not the second telecommunication node. (Kinrot – Column 4 Lines 35-65, Column 6 Lines 1-25)

Kinrot-Nishio-Rasanen disclosed (re. Claims 93) wherein the remote node is a second telecommunication node, (Rasanen-Column 3 Lines 20-35, Column 6 Lines 60-65)

and wherein the comparing step is performed in the second telecommunication node. (Kinrot – Column 4 Lines 35-65, Column 6 Lines 1-25)

Kinrot-Nishio-Rasanen disclosed (re. Claims 94) signaling by a second telecommunication node operable to monitor the second air interface, the second telecommunication node signaling to communicate the second maximum air interface transmission rate to a second remote node. (Rasanen-Column 3 Lines 20-35,Column 6 Lines 60-65)

Kinrot-Nishio-Rasanen disclosed (re. Claims 95) wherein the remote node is the second telecommunication node and wherein the second remote node is the first telecommunication node. (Rasanen-Column 3 Lines 20-35,Column 6 Lines 60-65)

Kinrot-Nishio-Rasanen disclosed (re. Claims 96) wherein setting the communication session transmission rate comprises signaling by the first telecommunication node and the second telecommunication node to, respectively, a first endpoint and a second endpoint to control their respective encoding rates. (Rasanen-Column 3 Lines 20-35,Column 6 Lines 60-65)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 75 ,85 rejected under 35 U.S.C. 103(a) as being unpatentable over Kinrot (US Patent 6574193) in view of Nishio et al. (US Patent 6192039), further in view of ITU-T Recommendation I.366.1 (Segmentation and Reassembly Service Specific Convergence Sublayer for the AAL Type 2) ,hereinafter referred to as ITU-T.

Kinrot-Nishio did not disclose (re. Claim 75,85) implementing the information rate control function over a Service Specific Convergence Sublayer (SSCS) using I.366.2 cells in an ATM network. While Kinrot-Nishio was concerned with congestion control in ATM networks, Kinrot would have been motivated to look for other disclosures concerning ATM networks, such as ITU-T.

ITU-T disclosed (re. Claim 75,85) a flow control mechanism that allows an SSADT receiver to control the rate at which the peer SSADT transmitter entity may send information. (ITU-T – Section 9.1) ITU-T disclosed using said SSADT over AAL Type 2 connections as used over various embodiments of an ATM network. (ITU-T – Section 9.1, Section 9.2)

Kinrot-Nishio and ITU-T are analogous art because they present concepts and practices regarding the implementation of flow control mechanisms over an ATM network. At the time of the invention it would have been obvious to combine the teachings of ITU-T regarding using the SSADT sublayer to implement a flow control mechanism in ATM networks. The motivation for doing so would have been, as ITU-T suggests (ITU-T – Section 1), in order to implement assured data transfer features between nodes in an ATM network.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 76, 86 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinrot (US Patent 6574193) in view of Nishio et al. (US Patent 6192039), further in view of Brueckheimer et al. (US Patent 6574224) hereinafter referred to as Brueckheimer.

Kinrot-Nishio did not disclose (re. Claims 76,86) a rate control mechanism in an RTP Transport layer in an ATM network; (re. Claim 58, 76) wherein the core network is an IP network.

Brueckheimer disclosed (re. 76,86) an ATM switch based resource module performing signal processing functions and interworking processed traffic between RTP and AAL1, 2, 5 (Brueckheimer – Figure 7, Column 7 Lines 1-10, Column 8 Lines 10-20). Brueckheimer disclosed (re. Claim 58, 76) wherein the core network is an IP network. (Brueckheimer – Column 8 Lines 10-20)

Kinrot, Nishio, and Brueckheimer are analogous art because they present concepts and practices regarding the implementation of control mechanisms over an ATM network. At the time of the invention it would have been obvious to combine the teachings of Brueckheimer to use RTP Transport Layer mechanisms in ATM networks. The motivation for doing so would have been, as Brueckheimer suggests (Brueckheimer – Column 2 Lines 60-65), in order to meet demands of the IP and ATM adaptation layers and the likelihood that both IP and ATM technologies will be deployed in the near term for both real-time and non-real-time services.

Response to Arguments

Applicant's arguments filed 07/18/2008 have been fully considered but they are not persuasive.

The Applicant presents the following argument(s) [in italics]:

... Kinrot fails to disclose monitoring the availability of air interface resources, which are typically used by mobile (or wireless) terminals to access a network. For this reason, of course, Kinrot also fails to disclose comparing two (or more) air interface maximum information transmission rates, and also therefore fails to disclose setting a maximum communication rate based on this comparison.

The Examiner respectfully disagrees with the Applicant.

Kinrot is not relied upon to disclose *monitoring the availability of air interface resources*.

Nishio Column 8 Lines 60-65 disclosed a mobile device communicating via an ATM transmission path which inherently includes an air interface where the transmission path is monitored by the flow control module (Column 13 Lines 20-25). Thus Nishio disclosed *monitoring the availability of air interface resources* in order to prevent congestion (Nishio-Column 14 Lines 25-30).

Kinrot disclosed selecting the lower value between a plurality of transmission rates in an ATM network. (Kinrot – Column 4 Lines 30-35, Column 9 Lines 25-35) Kinrot

also disclosed determining whichever of the paths is the most congested (Kinrot - Column 3 Lines 1-5).

The Examiner notes that where Kinrot disclosed a selection of the lower value between a plurality of transmission rates, then Kinrot disclosed *comparing two (or more) air interface maximum information transmission rates*.

Thus the combination of Kinrot and Nishio disclosed 'control of air interface resources and monitoring of the availability of the resources based on the condition of at least two air interfaces'.

While Nishio describes flow control during handoff, it is in the context of a mobile terminal traveling at high speed from one radio zone to another (Nishio-Column 1 Lines 20-30). It would be obvious to one of ordinary skill in the art that Nishio's intent is to maintain flow control over multiple handoffs, and thus essentially for the duration of the entire transmission. At any rate, Kinrot disclosed flow control regardless of whether a handoff is occurring or not. (Kinrot-Column 3 Lines 30-45)

The Applicant presents the following argument(s) [in italics]:

To the extent necessary, the arguments made by Applicants in previous Responses are re-urged in light of the above remarks. The Examiner's statements in the Response to Arguments of the Office Action are acknowledged, though traversed. Moreover, Applicants respectfully suggest they are no longer applicable to the claims as amended herein, especially in light of the remarks set forth above.

The Examiner respectfully disagrees with the Applicant. The remarks filed 07/18/2008 appear essentially the same as those from previous amendments, thus the Examiner maintains the response.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Greg Bengzon/
Examiner, Art Unit 2144

